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General Article

NOTES FROM THE PUBLICATIONS OF 1934 OF INTEREST IN VETERINARY PARASITOLOGY

[PREPARED BY MEMBERS OF THE N.V.M.A. ADVISORY COMMITTEE ON PARASITIC DISEASES.]

The selection of suitable material for these notes, at the hands of the Advisory Committee on Parasitic Diseases, has not been an easy matter; the number of publications appearing annually on Parasitology runs well into four figures and there is ample room for difference of opinion as to what the choice should be.

The notes do not represent abstracts of the various papers but only the briefest possible account of the new work, published during 1934, which appears to have a practical bearing on Veterinary Parasitology. In several instances the part mentioned is not the main point of the paper but only a comparatively insignificant one which appears to have some practical value. Where so little has been chosen from so large a mass of material, individual opinion must differ; some readers will, doubtless, consider that valuable work has been omitted, and others may think that publications have been noticed which have no useful application. Those who have made the selection hope, however, that most of the new work of practical value has been included.

ASCARIASIS

Lane[20] reviewed the literature on *Ascaris*. He concluded that air-borne infection is a practical danger and considered that the available data on the transmissibility of infection from pig to man is insufficient to negative this possibility, or to prove that there are two distinct physiological strains.

See also Treatment, Beckett.[1]

BOVINE NASAL GRANULOMA

Work has been continuing on this disease of Indian cattle. It still seems to be uncertain whether *Schistosoma spindalis* or another species described as *S. nasalis* is responsible. Injections of tartar emetic have been found very effective in treatment.[9, 27]

FASCIOLIASIS

Lührs[22] continued his work on the control of the liver fluke and lungworms by the application of present knowledge of control measures on farms where the disease is likely to appear —the beneficial results of cleaning out ditches and dressing the land with kainit and calcium cyanamide.

See also Diagnosis, Szepeshelyi and Urbányi.[38]

GAPES

Morgan and Clapham[24] found the infectivity of *Syngamus* larvæ to be greatly enhanced by allowing them to encyst in earthworms. Whereas it was difficult to transfer the gapeworms from one species of host to another directly through the infective larvæ, it could easily be done, in some instances, if the larvæ were first allowed to encyst in earthworms.

HUSK

Kauzal[18] reported observations showing that adult sheep develop a powerful resistance to the lungworm *Dictyocaulus filaria*, but he was unable to decide whether it was an age immunity or an acquired immunity.

See also Treatment, Kennedy.[19]

PARASITIC GASTRITIS

Ross[31] came to the conclusion, as a result of field observations, that the heavy losses from *Trichostrongylus* and *Ostertagia* infection in sheep, during the long, dry period, which lasts from November to April in Western Australia, are largely due to the very poor nature of the herbage, which is deficient at that time both in protein and in minerals. Stewart[37] carried out a series of experiments on the effect of stomach worms on digestion and assimilation in sheep, and concluded that they interfere with protein digestion and with calcium and phosphorus metabolism.

See also Epidemiology, Taylor.[40, 41]

STRONGYLIDOSIS

Enigk[10] published a summary of the work which has been done on the powers of resistance of the eggs and larvæ of strongyles outside the body of the host. Larvæ of *Trichonema* sp. under his observation retained their vitality for 4¼ years when exposed on a glass slide in the laboratory.

See also Treatment, etc., Hare,[14] Enigk.[10]

EPIDEMIOLOGY

Taylor[40] investigated the epidemiological reasons underlying a number of outbreaks of parasitic gastritis in sheep and described two epidemiological types (*a*) where pathogenic infection is acquired from a residue of infective larvæ on the land and (*b*) where pathogenic infestation is acquired as a result of autoinfestation. A period of six days was

found to be adequate for the mass development of infective larvæ under actual field conditions. The risk of pathogenic infection is much greater on arable land, where precautions are not strictly observed, than it is on pasture. In a further paper Taylor[41] investigated the causes leading up to the severe epidemic of parasitic gastritis associated with *Trichostrongylus* and *Ostertagia*, which occurred during the winter of 1933-1934. Enquiries showed that 43 farmers on the Romney Marsh alone lost over £10,000. It was concluded that the prolonged drought had been the cause, the bare pastures leading to a maximum intake of infective larvæ, the poor nature and shortage of grass leading to malnutrition and increased susceptibility of the sheep, and the storage of potential infection on the ground (in the form of embryonated eggs, which in *Trichostrongylus* spp. are very resistant to dryness) and its ultimate liberation at the end of the dry weather.

Physiology and Life Histories

Spindler,[34] in observations on the longevity of the larvæ of *Stephanurus dentatus*, the kidney worm of pigs, found the maximum survival period under field conditions to be 76 days. Freezing quickly kills them, as also does direct sunlight.

Clapham[6] found that the eggs of *Heterakis gallinæ* retain their infectivity in the soil for over 12 months.

Steward[36] worked out the life history of *Onchocerca cervicalis*. A kind of gnat, *Culicoides nubeculosus*, was found to serve as the intermediate host. The same author[35] found this parasite in 20 out of 30 cases of fistulous withers and poll evil in horses.

Pathogenicity

Foster and Landsberg[12] investigated the cause of hookworm anæmia in dogs and concluded that it is unnecessary to postulate a toxin, the anæmia being identical with that caused by continuous or intermittent hæmorrhage. They found, in agreement with other workers, that hookworm anæmia responds well to iron therapy.

Biggam and Ghalioungui[3] reported their observations on human hookworm disease, as a result of which they concluded that iron therapy often corrects the anæmia, although the removal of the worms may not do so.

Rhoads *et al.*[29] in observations on human hookworm disease in Puerto Rico, found that the anæmia responded better to iron therapy than to anthelmintic treatment without iron.

Schmid[33] described an outbreak of disease affecting the bladders of 85 per cent. of the foxes on a certain farm. It appeared to be caused by the bladder worm *Capillaria plica*.

Hemmann[15] reported an unusually heavy infection of *Echinococcus* in a cow; cysts were found in almost every organ and the liver weighed 50 pounds. The symptoms had led to a diagnosis of tuberculosis.

Tyzzer,[42] in experiments on blackhead, found that large numbers of *Heterakis gallinæ* developing in the cæca of chickens produced a characteristic helminthic typhlitis.

Beveridge[2] found that the larvæ of *Strongyloides papillosus*, one of the commonest parasites of sheep, in penetrating the skin of the interdigital space, are capable of introducing the *Bacillus necrophorus* and causing "foot rot." The disease was successfully brought about under experimental conditions by applications of material from infected feet along with the infective larvæ of *S. papillosus*.

See also Treatment, Cross.[7]
Parasitic gastritis, Stewart.[37]
New species, Wolffhügel,[44] Chitwood,[5] Orloff *et al.*[25]

Diagnosis

Szepeshelyi and Urbányi[38] described a method of concentrating the eggs of *Fasciola hepatica* by flotation in a solution of ten grammes of mercuric iodide and 7·4 grammes of potassium iodide in 26·5 c.c. of water.

Treatment and General Control Measures

Rebrassier[28] found a preparation containing 0·8 per cent. of pyrethrin, in doses of 200 milligrammes, to answer as a very effective vermicide for *Ascaridia lineata* in chickens.

Cross[7] found that small doses of copper sulphate without the addition of iron caused the hæmoglobin index to rise from 22 per cent. to 48 per cent. in cases of hookworm anæmia in dogs.

Beckett[1] reported marked improvement from the extensive use of chenopodium in pigs; the doses advocated were 20 minims to 2 drachms according to age (eight weeks to 12 months). [Apart from the use of copper sulphate in sheep there are very few reports on the extensive use of anthelmintics.]

Hare[14] reported on the use of chenopodium in 2,000 horses in which no untoward results were observed. In his hands a dose of 15 to 20 c.c. did not produce abortion in pregnant mares. [This differs from the experience of others.]

Wright[45] advised 75 to 150 c.c. of 10 per cent. calcium gluconate, given intravenously very slowly, as good treatment for carbon tetrachloride poisoning in the horse. In subacute cases 100 to 150 c.c. intramuscularly is satisfactory.

Kennedy[19] reported a controlled observation on the effect of intratracheal injections of a mixture of turpentine, olive oil, creosote and chloroform in four cattle. Four other affected cattle were left untreated but did not make such a good recovery as the treated ones.

[This is of interest because there are so few records of controlled observations on the effect of this treatment; most of the others suggest that it is of little value.]

Enigk[10] observed that the larvæ of various species of *Trichonema* (cylicostomes) retained their vitality on a glass slide for 4¼ years. He found that fresh urine kills strongyle larvæ in 15 to 48 hours, two- to three-weeks-old urine kills in 2½ hours, but tankage is much less effective. Cow's urine is less potent than horse's; it appears to be the ammonia which kills. Parnell[26] observed that saturating manure with the urine of horses or cattle killed the eggs and larvæ of parasitic worms. Twenty-five per cent. of urine was sufficient to do this.

Ross[30] was unable to confirm his previous findings that starvation is the most important factor influencing the passage of fluids to the abomasum, but found that drenching with a solution of copper sulphate caused a constriction of the œsophageal groove and resulted in a large proportion of the copper sulphate and anything mixed therewith reaching the fourth stomach direct. Ross and Gordon[32] carried out a series of experiments on the influence of fasting over the efficiency of anthelmintic treatments for stomach worms in sheep, but were unable to find any evidence that preliminary fasting increased the anthelmintic efficiency of copper sulphate or carbon tetrachloride treatment.

New Species

Faust and Tang[11] found a new species of *Syngamus* (*S. auris*) in the middle ear of cats in China. Eleven out of 48 cats examined were found to be affected. Buckley[4] described a new species of *Syngamus* (*S. ierei*) from the nares of cats in Trinidad. As many as 27 pairs of worms were found in one animal.

Wolffhügel[44] described a new worm related to *Hæmostrongylus* from the veins in the lumbar region of the spinal cord of cats in Chili. The presence of the worm brought on a slowly developing paraplegia. The new worm is called *Gurltia paralysans*.

Chitwood[5] found a new species of filarial parasite in the skin of cattle showing lesions resembling those previously described as *dermatitis squamosa et crustosa circumscripta*. This dermatitis has frequently been observed in the United States. He named the parasite *Stephanofilaria stilesi*.

Orloff *et al*[25] observed a disease in sheep in Russia caused by a new species of trematode which they named *Skrjabinotrema ovis*. In life the disease is not easy to recognise, there being no diagnostic symptoms; affected sheep are badly nourished, even debilitated, and diarrhœa is common. On *post-mortem* examination the mucous membrane of the small intestine is seen to be greatly swollen and dotted with thousands of small trematodes. The new genus is related to *Hasstilesia*. The worms are only 0·8 to 1·12 mm. long and the eggs ·024 to ·032 mm. long.

Miscellaneous

Tarassow[39] found up to 100 per cent. of pigs infected with the tapeworm *Diphylobothrium latum* in certain villages in Russia. This is the first time an adult cestode has been found as a normal parasite of the pig.

Diseases caused by Parasites other than Worms

Coccidiosis.—Herrick[16] found chicks from resistant parents to be 100 per cent. more resistant to coccidiosis due to *Eimeria tenella* than chicks from unselected parents. Lee[21] studied the pathology of coccidiosis in the dog and found the causal parasites to be transmissible from cat to dog. A partial immunity is acquired as a result of infection. Gousseff[13] described a coccidium from the horse and called it *Eimeria solipedum*. Jones[17] investigated the effect of diet upon coccidiosis in chickens and found that variation in vitamin A and the protein ration appeared to make little difference to the severity of the disease.

Northern Fowl Mite.—Whitehead and Maw[43] found a mixture of finely ground naphthalene and vaseline, painted on to the perches, to be very effective for the control of the northern fowl mite, *Liponyssus sylviarum*. [This mite has been observed on several occasions in this country.]

Blackhead.—Tyzzer[42] published an account of a detailed study showing conclusively that the causal organism of blackhead can be carried by the embryonated eggs of *Heterakis gallinæ*, although the parasite has not yet been recognised in the egg by microscopical examination.

He gave an account of further evidence which appears to provide conclusive proof that *Histomonas meleagris* is the causal agent. By means of careful isolation alone he was able to rear healthy turkeys in a pen which was in close proximity with pens containing diseased turkeys, and considers that this is a commercial proposition. A full description of the parasite also appears in this paper.

Sheep Nostril Fly.—Dill[8] reported occasional heavy losses in sheep in Nevada from the sheep nostril fly, and correlated the epidemics with dry seasons: the apparent reason being that in dry seasons the sheep are allowed to remain at the few watering places for periods of several weeks; there is then time for pupation to be completed and the flies to appear in large numbers, with resulting heavy infection. Frequent moving of the sheep prevents this heavy infection.

Warbles.—Reports appeared in the literature of the good results of the wholesale preventive measures which are being carried out in

Germany against this parasite. These were summarised over the initials J. T. E. in *The Veterinary Record* for March 17th, 1934.

A summary of recent work on eradication in this country was also published by MacDougall,[23] an abstract of which appeared in *The Veterinary Record* for March 16th, 1935.

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Annotation

EXPERIMENTAL INFECTION OF CATTLE WITH SYPHILIS*

Inconclusive results were obtained in attempts to infect the lower animals until the classical experiments of Metchnikoff and Roux (1903-6) demonstrated conclusively that syphilis is communicable to certain monkeys and especially the higher apes. Bertarelli (1906) (1907) is generally believed to have been the first to demonstrate that lesions could be experimentally produced in the eye of the rabbit with *Treponema pallidum*. Parodi (1907) succeeded in producing syphilis in the testicle of the rabbit. The strain of Truffi (1909), one of the early investigators of experimental syphilis in the rabbit, is still employed extensively. Many attempts have been made to infect other species of animals, but if one takes as the criterion of infection the production of a primary lesion then reports of the successful inoculation of cats, dogs, goats, horses, rats, mice and guinea-pigs must be taken as entirely negative or of doubtful reliability. It must be borne in mind, however, that well-proven instances of syphilitic infection in man without chancre formation are on record. Further, though subscrotal grafting of portions of tissue containing the *Treponema pallidum* into rabbits may lead to the development of active lesions and a generalised infection, in those cases where no active lesions appear, the inguinal and popliteal glands may be infective even up to two years after infection, Brown and Pearce (1919). Schlossberger (1927) and Kolle and Schlossberger (1928) demonstrated that an infection without chancre formation is produced in mice and these animals may harbour *Treponema pallidum* for more than a year without showing any sign of disease. Portions of spleen, brain and lymph glands removed from mice 16 months after infection still produced the disease when grafted into rabbits.

Jaureguy and Lancelotte (1924) stated that they had reproduced syphilis in South American llamas and had cured them and also some human cases with the serum obtained from llamas which had been immunised with cultures of *Treponema pallidum*. No confirmation of these experiments has been brought by other investigators who have attempted to repeat their work.

There appear to be no experiments on record in attempts to infect cattle with syphilis and Béclère, whose results are described in the present paper, appears to be the first to have used these animals. His original idea was to inoculate cattle on the skin by scarification with a mixture of vaccinia virus and syphilitic material in the hope that the effect of the virus infection would be to aid the penetration of the spirochætes into the tissues with the production of a syphiloma. Experiments made in this way gave no success so it is unnecessary to refer to them in detail. The vaccinal lesions produced by inoculation with the mixture healed as in a pure virus infection. Neisser (1911), it may be recalled, had previously made 40 experiments of a similar nature on the lower monkeys with equally unsuccessful results. He had hoped that the effect of the vaccinal infection would be to lower the resistance to infection with *Treponema pallidum* of regions other than the eyelids and genital organs in which syphilitic lesions may be produced.

In the same connection it is interesting to note that Pearce (1928) observed that rabbits inoculated in the testicle with syphilis and at the same time in the skin with vaccinia developed a relatively more severe disease, as judged by incidence of generalised syphilitic infection, when compared with that noted in control animals infected with syphilis alone. On the other hand, rabbits immunised to vaccinia and then infected intratesticularly with syphilis developed a less severe syphilitic infection as did those rabbits inoculated intratesticularly with a mixture of syphilis and vaccinia. In Béclère's experiments, although inoculation of syphilitic material on to the genital organs, eyelids, etc., was made in some cases on animals which had also been inoculated with syphilis and vaccinia mixture on the skin, there is not any evidence to show that the vaccinia infection influenced the results recorded below.

Béclère made other experiments in which rabbit and human syphilitic material was inoculated by scarification or grafting. The sites chosen for inoculation by scarification were the eyelids, especially the free border, the clitoris and vulva or the prepuce and for inoculation by grafting the mammary gland or the scrotum. The rabbit strain of syphilis employed was the Truffi strain which had been passaged for more than 20 years in rabbits. Levaditi and Vaisman (1932) recently recorded that this same strain has now become non- "chancrigenic"

* Béclère, A. (1934.) Transmission expérimentale de la syphilis a l'éspèce bovine.

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for chimpanzees. The human material employed in Béclère's experiments originated from syphilitic cases in man showing well-developed primary lesions.

The results of four experiments made on cattle with rabbit material by Béclère must be recorded as positive in two cases and negative in the other two.

Of three attempts made to infect cattle with human material one was reported to have given a positive result and two were negative.

Lesions appeared about a month after inoculation as small papules in the case of the scarification experiments or as small nodules under the skin in the grafting experiments and in these lesions spirochætes could be demonstrated. No true chancre formation appears to have occurred nor a generalised infection recorded (infection of lymph glands, etc.). It is of some significance that although serological tests were made a slight Wassermann positive reaction of a transient nature was recorded in one instance only and that in an animal in which no lesion had followed inoculation with human material. No evidence is produced that rabbits could be infected by inculation with material taken from cattle in which lesions appeared and that the spirochætes demonstrated, especially in the genital and eyelid lesions, were always *Treponema pallidum*. Attempts to infect a heifer and a rabbit with the material from the lesions on two of the heifers inoculated gave extremely doubtful results. Béclère states that his results show definitely that cattle can be infected with syphilis although it is not always easy.

I. A. G.

Abstracts

[Some Experiences with Potassium Antimonyl Tartrate in the Treatment of Bovine Trypanosomiasis in Nigeria. Marshall, R. S., Lester, H. N. O., and Jones, A. G. F. (1935.) *J. Comp. Path.* *48.* 58-67. 2 tables. (9 refs.)]

The authors record a series of experiments to determine the value of tartar emetic as a trypanocidal agent in native Nigerian cattle. The doses varied, but 0·06 to 0·08 c.c. of a 4 per cent. solution in saline per kg. body weight was taken as the standard and an interval of six to seven days was allowed between doses. In one experiment, 40 cattle were inoculated with freshly isolated *T. vivax* and *T. congolense* and the disease allowed to run its course for about a month. Of 30 animals treated with tartar emetic 19 died, whilst of ten controls six died. Small gradually increasing doses of tartar emetic at short intervals produced slightly better results; of 20 experimentally infected animals, six survived after six months, whereas all of ten controls died within two-and-a-half months. The administration of tartar emetic to animals suffering from a pure *T. vivax* infection reduced the mortality rate to 30 per cent., the control mortality being 50 per cent. In the case of animals suffering from a pure *T. congolense* infection, four out of six animals remained alive six months after treatment with tartar emetic, whereas eleven untreated animals died. The author concludes that the use of tartar emetic may be of assistance in mild infections but that some more efficient drug is urgently required. J. A. N.

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[Fracture of the Hyoid Bone in the Horse. Krüger. (1934.) *Zschr. Veterinärk.* 47. 2 and 3.]

The author summarises the German veterinary literature, gives a systematic description and one new case record.

Fracture of the hyoid bone is a rare condition because of its protected position. Occasionally, however, an injury to the parotid or throat region or a tug at the tongue may fracture the bone. The symptoms include prolapse of the tongue, salivation, difficulty in chewing and swallowing and there may be swelling and pain in the region of the throat. Crepitation is usually absent.

According to Silbersiepe, diagnosis by X-ray is quite reliable, though ordinary clinical methods are insufficient to make a definite diagnosis.

Depending on the type and position of the fracture, there may be a wound of the guttural pouch and a bone splinter may break open blood vessels, of which large ones are present in the neighbourhood (see case record below). Chronic fistulæ are sometimes formed.

Treatment is often of no avail, the animal dying of malnutrition due to the inability to swallow.

Case Record: An army riding horse suddenly developed a copious bilateral nasal discharge, at first clear and frothy and later becoming turbid. Examination failed to reveal the origin of this and treatment for pharyngitis was carried out. The general condition was good and a moderate appetite was maintained for 25 days, when one day the horse was found dead with signs of copious bleeding from the nose.

Post-mortem examination showed a healed fracture of the left large cornu of the hyoid, with callus formation which extended to the attachment of the bone to the cranium. The left guttural pouch was chronically inflamed and there was a loose bone splinter which had penetrated the large blood vessels in the region.

The syndrome in this case was atypical and recovery would probably have occurred had the free splinter not been present to work its lethal action. J. E.

[**Myocardial Degeneration and Calcification in the Calf.** (Trans. title.) Pietsch, K. (1934.) *Tierärztl. Rdsch. 40.* 27. 447-450. 2 figs. (17 refs.)]

Calcification of the heart muscle in calves is a common occurrence. The lesion is quite obvious to the naked eye and consists of whitish flecks and streaks in the muscle, usually in the left ventricle, sub-epicardial and sub-endocardial in position. Histologically the early lesions show a granular deposit of calcium salts in the muscle fibres and later solid deposits with obliteration of the normal structure. The muscle fibres in the direct neighbourhood usually show degenerative changes such as swelling, loss of striation, and nuclear degeneration. Foci of large phagocytes and lymphocytes can be seen at the periphery of the lesion. The ætiology of this condition is unknown, but various workers have suggested that it may be caused through some toxic or infectious condition. This author considers that the calcification is definitely secondary to degenerative changes in the heart muscle. In this case the calcification must be brought into line with the very common occurrence of calcareous deposits following as a sequel to necrosis, *e.g.*, in tuberculous lesions. A similar type of heart muscle calcification has also been observed in young lambs and pigs. Although many theories have been put forward as to the deposition of calcium salts in necrotic tissue, none have so far been proved to be adequate.

J. R. M. I.

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[**Plumage and Eye Colour Inheritance in the Single Comb Rhode Island Red Fowl.** Warren, D. C., and Gordon, C. D. (1933.) (Kansas Agric. Exp. Sta.). *J. Agric. Res. 47.* 897-910. 1 fig.]

A study of a large flock of Rhode Island Red fowls showed that, although there exist considerable differences in the intensity of red colour in the different regions of the body, there was no evidence that the colour grades of these regions were inherited independently. The general results tend to support the hypothesis that colour of all regions is regulated by a single major factor. Variation in intensity of pigmentation of the general surface, hackle, and breast feathers appears to be hereditary and probably has a polygenic basis. The evidence favouring the inheritance of colour intensity in the under surface of the plumage (including basal fluff) is much less definite. The degree of black in the wings is independent of the pigment intensity of the general surface; there exists very close agreement in the mean grade of parents and offspring with regard to amount of black in flight feathers. Variation of eye colour did not show definite evidence of a genetic nature. Sexual dimorphism of colour was observed, the males averaging darker than the females. When there was any evidence of dominance, it was the lighter colour that was dominant. None of the characters studied showed any sex-linkage.

W. C. M.

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[**The Vitamins present in Ox Serum.** Fine, I. J. (1933.) *Biochem. J. 27.* 5. 1498-1500.]

It has previously been shown that rat blood contains vitamin A, and its presence in serum has been inferred from the fact that carotene isolated from serum possesses vitamin A activity. Vitamin B_1 is absent from blood, according to Kollath, whilst Hoagland found that vitamin B_2 was present. The present author fed four series of rats on separate diets: (1) complete in vitamins, (2) without vitamin A but containing ox serum, (3) without vitamin A, and (4) without vitamin B but containing ox serum. Since the rats on diets (1) and (2) remained healthy and gained weight whilst those on diets (3) and (4) died without gaining weight it is deduced that ox serum contains vitamin A but not vitamin B. From the comparative gain in weight on diets (1) and (2) it is calculated that the serum used possessed approximately $\frac{1}{200}$th of the potency of the cod-liver oil used.

C. G. A.

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[**Honey for External Use.** Lührs. (1934.) *Zschr. Veterinärk. 47.* 2.]

Inspired by the report of Zais on the use of honey in human surgery, Lührs here presents briefly experience on the use of a mixture of honey, barley meal and olive oil in veterinary practice. It has been used with success as a wound dressing for deep wounds and for the treating of injury to the lower legs of farm horses caused by an artificial fertiliser [not named]. In the latter instance nearly 100 horses were affected and losses of 25 per cent. were reduced to 4 per cent. after the adoption of the above mixture as a wound dressing.

The mechanism of the actions of honey as a wound dressing is not discussed in detail.

J. E.

A monument to the "Unknown War Horse" has been unveiled in the courtyard of the Francis Joseph Cavalry Barracks in Budapest. The monument was erected on the initiative of General Stephan Horthy. After the unveiling ceremony the horses of the Regiment of Hussars quartered in the barracks filed past the statue led by their riders.

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The question of centralised slaughtering will be considered in all its aspects by a special committee of the Ministry of Agriculture and the County Councils' Association, and other interested organisations will be consulted.

Reports

NEW SOUTH WALES

Department of Agriculture: Livestock Diseases Report for the Year ending June, 1934

(Max Henry, M.R.C.V.S., B.V.SC.)

A further removal of the restrictions on inter-State livestock and animal products traffic was made during the year, this time between New South Wales and South Australia. In 1933, those between New South Wales and Victoria were raised. The freedom thus given has assisted the livestock industry in the States concerned without increasing the risk of disease transmission between them.

Animal Census: In New South Wales there were 528,943 horses; 3,144,174 cattle; 53,698,000 sheep and 388,273 pigs in March, 1933. The imports of animals to the State in the year under review from countries outside Australia numbered 79,501. The periods of quarantine for livestock from Great Britain, Irish Free State, Canada and the U.S.A. have been reduced.

Disease Control:

Contagious Bovine Pleuropneumonia.—Restrictions are still in force to prevent the spread of this disease from infected to clean areas. There were 36 outbreaks in infected areas, involving 10,344 head of cattle, with a mortality of 466. Apart from these outbreaks, 6,832 cattle were vaccinated. The complement-fixation test was introduced in diagnosis, towards the end of the year—the antigen used being that prepared by Ebest and Peretz.

Anthrax.—An outbreak of this disease occurred in a clean area. The source of infection was not discovered, but artificial manure was suspected. There were 38 outbreaks in infected areas. Sheep to the number of 164,204 and 3,813 cattle were vaccinated.

Tuberculosis.—Only slow progress has been made so far in controlling this disease, but more accelerated action is anticipated. The incidence of tubercle bacilli in 126 samples of bulk milk examined was 2·38 per cent. Clinical examination of over half-a-million head of cattle was made and 1,222, or 0·23 per cent., were by this means found affected. The establishment of tubercle-free herds for the supply of milk in municipalities is extending and the Department favours the introduction of an "attested areas" plan towards eradication.

Piroplasmosis.—The incidence of this disease was reduced by 50 per cent. during the year. Only five outbreaks occurred, all within the tick-fever zone. The disease is controlled by regular dipping. Eleven cases of *Theileria mutans* infection are reported.

Black Disease.—A definite increase in this disease is reported by the District Veterinary Officer (South) in farms where no action had been previously taken to control "fluke" infestation, whereas, in farms where regular preventive measures had been practised, no increase in the disease occurred. Prevention consists of snail destruction by copper sulphate, dressing of the land, drenching of the sheep for fluke disease and vaccination against black disease itself.

Actinomycosis.—Five hundred and sixty-nine cases were reported.

Swine Fever.—There were no outbreaks reported.

Tick Control.—Marked progress towards tick eradication is reported by the Board of Tick Control, although, on account of financial restrictions, no actual eradication was undertaken during the year. Control measures consist of quaranting infested areas and dipping livestock therein.

Lice and Ked Infestation of Sheep.—The areas infested by these parasites are being demarcated. Ked (*Melophagus ovinus*) is found in a belt of high and cold tableland near the coast, while the sheep louse (*Trichodectes sphaerocephalus*) occurs in the lower and hotter parts of the hinterland. Infestation with lice involved 655,000 and with ked 400,000 sheep. These parasites are controlled by dipping where possible.

Entero-Toxæmia.—Losses from this disease were encountered principally in well-nourished lambs. A change of diet caused cessation of losses in some cases.

Poultry Diseases.—Diseases reported were: infectious catarrh, which was responsible for heavy losses; coccidiosis; worm infestation; fowl pox and pullorum disease.

Swine Diseases.—Of the various diseases affecting pigs seen during meat inspection, tuberculosis and *S. suipestifer* infection were by far the most prevalent. The latter is described under the heading of septicæmia.

Laboratory Work.—A large amount of routine diagnosis in hand during the year interfered with the prosecution of research. Twenty-three thousand specimens were examined.

W. K.

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SOUTHERN RHODESIA

REPORT OF THE VETERINARY DEPARTMENT FOR 1933

In the review of the Southern Rhodesia report for 1932, the Veterinary Department was congratulated upon the fact that, after many years of continuous effort, the Colony was at last free

from foot-and-mouth disease and African Coast fever. It is greatly to be regretted that such a desirable state of affairs has not continued. Both diseases made their appearance during 1933 and caused great concern—so much so, that the late Chief Veterinary Surgeon, who had only retired a few months previously, was asked to assist in an advisory capacity. Both diseases were spread by movement of stock, one illegal, made or commenced before a diagnosis had been arrived at. In the case of African Coast fever, temperaturing, and destruction of all infected animals, and intensive dipping of neighbouring herds, has checked spread and the outlook is hopeful.

Foot-and-mouth disease has appeared, in recent years, in Southern Rhodesia and practically all neighbouring territories. The importance of this disease lies, of course, not in the mortality, which is negligible, but in the restrictions upon movement of stock and produce imposed by neighbouring governments. The recrudescence in Southern Rhodesia was due, it is stated, to cattle imported from the Bechuanaland Protectorate. Curiously enough, the animals had been under direct veterinary supervision for almost six months immediately prior to the diagnosis being made. Through movements of stock, foci of disease were established at very considerable distances. At the end of the year, the situation was most unsatisfactory. The most interesting thing about the outbreak is the fact that the virus is different from that of the 1931 outbreaks. This has been confirmed in England. Cattle which were, and are, immune to the 1931 virus are susceptible to that of 1933. The question arises as to how this change has taken place. Passage through game may be responsible. The importance of the change cannot be over emphasised as it renders future control much more difficult. If, after cattle have been immunised against one virus, a different one is to cause a recrudescence, the position becomes almost hopeless.

In other respects, the situation, as regards disease, in the Colony is normal. Cessation of dipping, due to lack of grazing and subsequent poverty, has been followed by increased mortality. The light rains were responsible for much poverty and loss in some districts. The export of chilled and frozen meat has proceeded, except for a few weeks, with regularity and nearly twelve million pounds weight has been shipped during 1933.

The report is a record of real effort under disappointing conditions and demonstrates, once again, the necessity for constant vigilance on the part of those engaged in combating animal disease in Africa.

J. S.

MYSORE, INDIA, SERUM INSTITUTE

REPORT FOR THE YEAR 1933-34

The report is submitted to the Mysore Government by Mr. S. D. Achar, the Superintendent. The main activity of the Institute is to prepare and supply various sera and vaccines to the Mysore Civil Veterinary Department and several other Indian States. In addition to anti-rinderpest serum, rinderpest goat virus, blackquarter filtrate, anti-hæmorrhagic septicæmia serum and vaccine, sheep-pox vaccine and anti-anthrax serum are supplied. During the year under report a quantity of fowl cholera vaccine was prepared also for experimental use in the field.

Some interesting experiments are recorded in regard to the use of goat virus for rinderpest inoculation, more particularly in connection with the viability of the virus.

There was a large increase in the quantities of biological products supplied and the Institute is undoubtedly serving a very useful purpose and being run, moreover, on a sound financial basis.

G. K. W.

STOCKBREEDING IN RUSSIA

"During the first three months of 1935, 32,500 new stockbreeding collective farms were organised in Russia, including approximately 15,000 dairy farms, 11,700 sheepbreeding farms, and 5,800 pig farms," says *The North British Agriculturist*. "This is in accordance with the decision of the Seventh Congress of Soviets to organise 70,000 new farms this year. In April of this year the collective stockbreeding farms throughout the Soviet Union numbered 240,000, with a total of 25·4 million head of cattle, pigs and sheep. The increase in the total number of livestock over the same period of 1934 is indicated by the following figures: Dairy farms 15·4 per cent.; pig farms 11·9 per cent; sheep farms 20·5 per cent. This increase, especially the increase in cattle, is accounted for not only by breeding and the organisation of new farms, but also by a considerable increase of cattle from outside sources. During this period 191,500 head of cattle were received from the State farms and collective farmers, also 20,000 pigs and 64,000 sheep. During the first three months of the present year the collective farms of the Soviet Union received 1,163,000 calves, 1,898,000 sucking pigs, and 2,468,000 lambs. The State plan for cattle breeding in 1935 provides for an increase in the total number of cattle in the collective stock farms to 11·1 million, pigs to 5,150,000, and sheep and goats to 14 million. By the end of the first quarter this plan was fulfilled throughout the Union to the extent of 75·6 per cent. in respect of pigs, 80·6 per cent. in cattle, and 89·6 per cent. in sheep."

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The object of an experiment now being carried out at Rowett Research Institute, Aberdeen, is to ascertain the nutritional value of treated and untreated milk for rearing calves. The Aberdeen Milk Board is supplying milk free of charge.

R.C.V.S. ANNUAL LUNCHEON

PRESIDENT ON GIFTS TO ANIMAL CHARITIES

Representation for Veterinary Science on the Agricultural Research Council

Pronouncements upon matters of considerable significance for the future of veterinary politics and education were made at the R.C.V.S. Annual Luncheon held at the Connaught Rooms, Great Queen Street, Kingsway, London, on Thursday, June 6th, 1935. The extent of the success or otherwise of the experiment of transforming the occasion from an evening to an afternoon function, and inviting the presence of ladies, remains to be assessed by those responsible, but there can be no question that the company, 88 in number, had speeches of moment to reward them for their loyalty to the Royal College and its popular President, Mr. G. H. Locke.

The list of guests, and the general company, included the following: Sir Frederick Gowland Hopkins, O.M., M.A., M.B., D.Sc., F.R.S., Dr. A. S. MacNalty, M.D., F.R.C.P., Sir Charles J. Howell Thomas, K.C.B., K.C.M.G., Sir Weldon Dalrymple-Champneys, Bart., M.D., Colonel Sir Percy Laurie, C.B.E., D.S.O., H. E. Dale, Esq., C.B., Professor W. W. Jameson, M.A., M.D., Esq., Dr. T. P. White, Dr. R. W. Tuck, James Forshaw, Esq. (President, National Horse Association), Dr. O. Charnock Bradley, M.D., D.Sc., CH.B., F.R.C.V.S., Professor J. Basil Buxton, M.A., F.R.C.V.S., D.V.H., Lieut.-Colonel P. J. Simpson, D.S.O., T.D., F.R.C.V.S., J.P., Major-General Sir John Moore, K.C.M.G., C.B., F.R.C.V.S., Professor Sir Frederick Hobday, C.M.G., F.R.C.V.S., F.R.S.E., J. W. McIntosh, Esq., M.R.C.V.S., F.R.S.E., Professor G. H. Wooldridge, F.R.C.V.S., M.R.I.A., Dr. F. C. Minett, M.B.E., D.Sc., M.R.C.V.S., Colonel G. K. Walker, C.I.E., O.B.E., V.D., F.R.C.V.S., and Lieut.-Colonel J. W. Brittlebank, C.M.G., M.R.C.V.S., D.V.S.M.

THE TOAST OF THE ROYAL COLLEGE

Following the honouring the Loyal Toasts, Dr. A. S. MacNalty, M.D., F.R.C.P., Chief Medical Officer, Ministry of Health, submitted "The Royal College of Veterinary Surgeons," saying that it gave him much pleasure to come there that day to pay a tribute to the work of the College.

Their art was of great antiquity. Proverbs, xii, 10, had it that "A righteous man regardeth the life of his beast," and the Hammurabi Code (2100 B.C.) mentioned the "Doctor of oxen and asses." Treatises on Horses were written by Simon of Athens and Xenophon, and one of the books of Aristotle's *Historia Animalium* was devoted to veterinary medicine. So one came down the ages, noting the "Master Marshals" of London who practised the veterinary art and were organised as a trade guild before 1356, and the establishment of a Veterinary College in London in 1791, and another at Edinburgh in 1823, until one arrived at the year 1844 when the profession's Royal Charter was granted and the practice of Veterinary Medicine was recognised as a learned profession. In a few years they would be celebrating their centenary. (Cheers.)

He should keep them there all the afternoon if he recited the triumphs their profession had achieved in nearly a 100 years of progress. The value of their work had been recognised by the State in many ways. There was the establishment of the Royal Army Veterinary Corps, whose work in the Great War was well within their recollection, and one phase of which was admirably brought out in Sir John Moore's account of the care given to horses in the different campaigns. The Ministry of Agriculture and Fisheries relied much on the work of its expert advisers in Veterinary Medicine and at the Ministry of Health they had the benefit of Colonel P. J. Simpson's advice in a consulting capacity. (Hear, hear.)

The link between the medical and the veterinary professions was close and intimate. Indeed, at times the two professions might be said to be interchangeable. He had recently read the report of the birth of a young chimpanzee at the Zoo. A well-known obstetrician attended the accouchement. On the other hand, there was the authority of Mr. P. G. Wodehouse for the bracing effect experienced by a Bishop and his wife after taking a tablespoonful apiece of a veterinary medicine acting upon the red blood corpuscles, the medium dose of which for an adult elephant was one teaspoonful. (Laughter.)

Seriously, however, each profession could learn much from the other and their joint efforts could do much to maintain and improve the public health. He had learnt by personal experience as Secretary of the Tuberculosis Committee of the Medical Research Council and as a Medical Officer of the Ministry of Health how many problems of research into bovine tuberculosis and how many difficulties of medical administration were solved by the expert knowledge of members of the veterinary profession such as his friends Professor J. B. Buxton and Major G. W. Dunkin. The valuable work of their past President, Sir John M'Fadyean, in the same field, had been recognised by the Royal College of Physicians in awarding him the "Weber-Parkes Prize." (Cheers.)

That great physician, Sir Clifford Allbutt, whose clear vision looked ahead far beyond that of many of his contemporaries to medicine in its widest and most comprehensive form, laboured in season and out of season for the establishment of a Section of Comparative

Medicine in the Royal Society of Medicine. Before he died, full of years and honours, and thanks in no small degree, as he himself recognised, to the help of Professor F. T. G. Hobday, that Section was established in 1923 with Sir Clifford as its first President. John Hunter had written many years before: "In the course of a variety of experiments on animals and vegetables I have frequently observed that the results of experiments in the one have explained the economy of the other, and pointed out some principle common to both." The establishment of that Section of Comparative Medicine marked the beginning of great things. The seed of veterinary research was no longer sown in a lonely furrow. It fructified to-day in the rich garden of biological science. Medical and veterinary men now studied together the diseases common to man and animals—many of which might be carried by animals to man and conversely. One great advance of wonderful promise for suffering mankind had been the discovery that the ferret (which had been found by Laidlaw and Dunkin to be invaluable in their researches upon distemper in dogs) was susceptible to the virus of human influenza. This successful work of the team at the National Institute of Medical Research had been achieved by pathologists and veterinarians working together. The work of Dr. and Mrs. Mellanby on nutritional diseases in animals had benefited both medical and veterinary practice.

In the comparative study of nervous diseases he should like to refer especially to joint research work on similar lines, such as Ostertag's and Hutyra and Marek's study of epizoötic or cerebro-spinal meningitis in horses, Simon Flexner's differentiation of epidemic paralysis in fowls from epidemic poliomyelitis in man and Mr. L. P. Pugh's interesting account of "Epidemic Encephalitis in Dogs." All these were bits of the jig-saw puzzle of disease which one day would make up a complete picture.

The work they had inspired had gone, then, much further than the foundation of a new section in a Medical Society. Apart from the advances in knowledge which he had just mentioned, the influence of veterinary medicine had led to that subject being included in University teaching, notable examples being the degrees of Bachelor and Doctor in Veterinary Science of the Universities of London, Liverpool and Edinburgh.

The interest they had aroused had led to the setting-up of a Veterinary Laboratory at Weybridge by the Ministry of Agriculture; the establishment of the Institute of Animal Pathology by the University of Cambridge, so ably directed by Professor J. B. Buxton (when released from the many Committees in London on which they forced him to sit); the Research Institute in Animal Pathology, which had the good fortune to be directed by Dr. F. C. Minett; the Agricultural Research Council, which worked in close accord with the Medical Research Council and other research institutes in Scotland and elsewhere.

This great impetus in Research, then, owed much to the influence of the Royal College of Veterinary Surgeons.

In the more routine practice of their profession fresh openings were arising and the work of veterinary surgeons in undulant fever and contagious abortion, in foot-and-mouth disease, and in the protection of milch herds from tuberculosis to increase the safety of the milk supplies was being more and more appreciated by local authorities and the public.

Might their great work for the public weal continue: might they go on from strength to strength.

He gave them the health of the The Royal College of Veterinary Surgeons. (Cheers.)

The President, Mr. G. H. Locke, M.R.C.V.S., who was acclaimed on rising to reply, said that the toast of the Royal College had been so ably proposed by Dr. MacNalty, and so well received, that it was made a pleasure for him, as President for the time being, to rise and thank him for it.

On behalf of the Council of the College he wished to say how heartily they appreciated the presence with them at that Luncheon, of the Chief Medical Officer of the Ministry of Health. The proposer of that toast referred to the services which members of the veterinary profession cou'd and did render to the maintenance of the public health, and he felt a great personal pride and pleasure in recalling the fact that it was his (Mr. Locke's) father who first urged the appointment by municipalities of veterinary surgeons to carry out such duties as the inspection of meat and milk. (Hear, hear.)

A generation ago, when Professor Gamgee was asked at the First International Veterinary Congress in 1865: "What do you do in England with your diseased meat?" he replied: "We eat it"—and he was afraid that assertion was true in some places for many years after that date, if indeed, it was not often true to-day.

The first appointment of a veterinary Inspector by the City of Manchester was followed by similar appointments elsewhere by the more enlightened local authorities, but there was still a great leeway to make up in the efficient inspection of meat. It was only in the last few years that there had grown up a general recognition of the importance of securing, by routine veterinary examination, that *milk* for human consumption was free from the infection of disease. It was gratifying for those

who, like the Members of the Council of the College and of the National Veterinary Medical Association, had for so many years been working to secure recognition of the importance of the services which the profession could render to the public, to know that at last the "powers that be" were awake to the facts. They were now watching with interest the appointment by County Councils and other local authorities of numbers of veterinary public health officers for the carrying out of very important duties such as the routine examination of dairy cattle.

It was probably in consequence of the publicity given to this side of the profession's work that there had been a great rush of pupils to the Veterinary Schools. The number now in training had indeed broken all records, and the work of the Royal College as an examining body had been greatly increased. The number of first year students examined during 1934 was 299, and the total number examined was 840. It was likely, from the number of new students enrolled, that that number would be exceeded this year. For fear, however, it might be thought that they had paid more attention to quantity than to quality, let him say that the average educational standing of the newly-enrolled students was higher even than was the case when fewer students were entering. The Principals of the Veterinary Colleges had been able to choose, from among the large number of candidates seeking admission, only those with the highest educational qualifications. (Hear, hear.)

The Council of the Royal College was indeed specially desirous of encouraging the entry to the profession of men of the highest educational standing. With this object in view they were glad to accede to an application recently received from the University of Cambridge for special terms of admission for graduates in the Natural Sciences Tripos. (Cheers.) Bye-laws had just been passed to provide that such candidates, on the production of the necessary credentials, should be enrolled as third year students, while still in attendance, as post-graduate scholars, at Cambridge. They would, after a year's specialised study there, take out the Third Examination of the Royal College, and would afterwards attend the courses for the Fourth and Fifth Examinations at an affiliated Veterinary College. After taking the Final Examination for the Diploma of M.R.C.V.S., they would go back to Cambridge for what might be called a super-post-graduate course, leading to the Cambridge University Diploma in Veterinary Science. They confidently looked forward to the admission of such graduates as members of the profession, feeling sure that they would be fully competent to undertake work of the highest value both to the public health and to the economics of animal husbandry.

The Council had also instituted a new post-graduate Diploma in Tropical Veterinary Medicine and Hygiene, the syllabus for which was specially adapted for the training of candidates who wished to take up appointments in the Colonies. The course of training would enable them to equip themselves thoroughly for the duties which devolved upon them in the control of tropical diseases of animals.

The profession stood, therefore, at the moment at the brink of a new era, and they looked with confidence to the future. Their veterinary schools, with only two exceptions, either formed part of or were affiliated to Universities, and an increasing number of their students were studying for Degrees in Veterinary Science, in addition to the qualifying diploma. They should, in two years' time, be graduating the first batch of students who were taking the new Five Years' Course of study. By then, also, they should probably have enrolled a number of Cambridge Graduates, and the course for the Diploma in Tropical Veterinary Medicine and Hygiene might be in full swing.

So far as it was humanly possible, therefore, the Council of the College had made its preparations well in advance to be ready for the period of expansion in veterinary public health work that seemed to be opening out before the profession. They were confident that, given the friendly assistance of Departments such as that of Dr. MacNalty, and the Ministry of Agriculture, the veterinary profession of the future would be able to maintain the very highest standard of competence, and would be able to undertake with satisfaction to those Departments, and with advantage to the public, those duties in regard to the health of our domestic animals, and the inspection of foods of animal origin, that were their special province.

It was earnestly to be hoped that the various Public Health Acts would without much further delay be consolidated—after the necessary amendments—into a great sanitary code, based on modern scientific knowledge, and giving to each of those professions whose services were called upon to carry out the required duties, its proper sphere and its proper status. (Cheers.)

There was one other aspect of their work upon which he should like to touch before he closed; he referred to the difficulty experienced in securing funds for the advancement of Veterinary Research.

This year, as the R.S.P.C.A. had reminded them, was the centenary of the first Act of Parliament for the protection of Animals. They, whose professional lives were devoted to their welfare, to their maintenance in good

health, to the prevention of the spread of contagious diseases among them and the transmission of their diseases to human beings, to the search for knowledge which would diminish the incidence of animal diseases—they sometimes wished there could be some co-ordination of the work of the large number of charitable societies devoted to the welfare and protection of animals. It was disheartening to think that while the establishment and equipment of veterinary research institutes and veterinary hospitals scarcely ever benefited by the large legacies left by animal-loving men—and particularly women—thousands of pounds were frittered away annually in the support of institutions run by unqualified people whose main labours seemed to be the destruction in lethal chambers of small animal life, not infrequently by methods of doubtful efficacy. If only there could be a charity organisation society for animal charities—or preferably, perhaps, a King George's Fund for Animal Hospitals to which the charitably inclined might direct their legacies, for proper distribution under enlightened guidance—how much better would the gifts of the benevolent be husbanded, and what a help it would be towards the goal they all had before them, the prevention of all unnecessary suffering in animals. (Hear, hear.)

Was it too much to hope that in these enlightened days, the view would gradually gain ground among those who desired to help "our dumb friends," that their charity should be directed to assist those institutions which were properly staffed by qualified surgeons, so that on the one hand, the search for means of prevention of animal diseases might be advanced, and on the other that the animals of the poor might have as efficient attention as the animals of the rich.

He would conclude by once more thanking them for their cordial reception of that toast. (Loud cheers.)

"OUR GUESTS"

This toast was in the capable hands of Professor J. Basil Buxton, F.R.C.V.S., M.A., D.V.H., who said that the task which was given to one of the officers of the Royal College of Veterinary Surgeons in connection with the proposal of the toast which was coupled with his name was never an onerous one, because the guests who honoured them with their company on those occasions were invariably individuals who were intimately associated with one or other of the many points of contact which the members of the profession affected in their scientific life. He thought it was a high tribute to the work done by the veterinary profession that their guests were men of such prominence and that they should be willing, despite the many calls on their time, to join their circle and participate in their celebrations. He thought they were particularly fortunate in the presence of one whom he had no need to introduce—the President of the Royal Society. The name of Sir Frederick Gowland Hopkins had become a household word in this country; the need therefore was far less. But, speaking for himself, and he knew on their behalf also, they did greatly appreciate the trouble that Sir Frederick had taken in order to join their festive board. He was, as they would be, immeasurably pleased to know that that was the first function that Sir Frederick had attended since receiving his latest and greatest honour at the hands of His Majesty the King—the Order of Merit—an Order which Sir Frederick had so well deserved. (Cheers.)

Dr. MacNalty had already introduced himself to them in his own inimitable style, and no one could presume to follow him in his flights of rhetoric. It had been a privilege to him (Professor Buxton) to work with Dr. MacNalty for a number of years on problems which were not only of importance to his great Department, but the elucidation of which was also essential to the veterinary profession.

Proceeding, Professor Buxton said that unfortunately one of his victims had escaped him: he was anxious for a few words with his friend Sir Charles Howell Thomas who had unfortunately to rush away to keep another appointment. They greatly appreciated the effort he had made to be with them for such a short time. They had also with them Professor Jameson who was so well-known to all, not merely as the Dean of the London School of Hygiene and Tropical Medicine, but as the Professor of Public Health, and his recent association with that very important Conference which had been dealing with medical studies was probably fresh in the minds of all of them. The Report of that body was one which was going to have a peculiar interest for those of them who were engaged in paying attention to veterinary education. (Hear, hear.)

Sir Weldon Dalrymple-Champneys was also well known to them on account of the great interest he had taken in that disease of common importance to both professions—undulant fever—and also in the problem of tuberculosis; Sir Weldon had also made himself acquainted with the work of our profession through the association which he had sought with the N.V.M.A.; moreover, he had, as they knew, given a prize which should be an inducement to the earnest pursuit of scientific study. (Hear, hear.)

Mr. H. E. Dale, Principal Assistant Secretary of the Ministry of Agriculture, he hoped he might include in his circle of friends, but he would be having an interview with him in the not far distant future, on matters of finance, and so, thinking that in this instance at least,

discretion was the better part of valour, he should curtail the remarks which he had proposed to make concerning Mr. Dale. (Laughter.) He had already referred to the fact that the veterinary profession made a great number of fields of contact, and this was further illustrated by the presence there that day of Sir Percy Laurie. Not merely did they associate that name with a dashing officer of the Royal Scots Greys, but with that fine body of mounted men in London who were an unfailing source of pride to the public. One need only travel in other countries to appreciate the splendid turnout and equipment of the Metropolitan Mounted Police for which Colonel Laurie had been responsible. (Hear, hear.)

They had also with them the President of the National Horse Association. Mr. Forshaw had made for himself a name of world-wide repute for the breeding and judging of Shire horses, and anyone who had done that invariably found a tender spot in the heart of the average veterinary surgeon. (Cheers.)

Finally, but far from least, they extended a very cordial welcome to Dr. White. Dr. White was representing the United States Department of Agriculture in London in succession to their old friend Dr. Tuck, and they hoped that they might see as much of him as they had of his predecessor, on the occasions which lay before them. (Hear, hear.)

Continuing, Professor Buxton said that they had heard a good deal that day about the functions of the Royal College of Veterinary Surgeons, and he thought that one would have gathered from what had been said that its particular function was to produce adequate numbers of adequately trained veterinary surgeons to meet the public requirements. It was on that account that the previous night he was disturbed, on reading the latest number of a veterinary periodical, to see that the Ministry of Agriculture were becoming worried with the shortage of qualified veterinary surgeons, and that they might adopt the unusual course of making known to headmasters and others the prospects which a veterinary career offered. That gathering had heard already, from the President's speech, that the profession was going through one of those unusual periods which had occurred now and then in its history. It had set itself to provide a system of teaching which should meet all requirements in the public interest. He was not suggesting that it was satisfied in its endeavours in this respect; it was not, and it was prepared to make such other modifications as might be deemed necessary, but he would stress the point made by the President that the number of students examined in our schools had increased in a period of ten years from 369 to 840 and that there was every reason to believe that in the coming July examinations they were going to have presented to them a figure for the half year—let them mark—which was only a little less than the figure for the whole of last year. He mentioned that particularly because he thought that it would be unfortunate if there were any apprehensive feeling that there were insufficient numbers of potential veterinary surgeons available for the public service. He was convinced that that was not the case. He had often heard it said that in advertising a post an employer liked to have a long list of eligible applicants: he would point out that in such circumstances there was implied the existence of a long waiting list of highly eligible men, and he submitted that an unemployment list of that sort was demoralising to any profession. (Hear, hear.) The Royal College of Veterinary Surgeons had never failed in its history to supply the want of a Government Department even during the darkest days, in 1914 and afterwards, and he was convinced that whatever demands might be made upon their resources, professional or otherwise, the State would not find them wanting. (Cheers.) It was his privilege to submit that toast to them, and to couple with it the names of Sir Frederick Gowland Hopkins and Mr. H. E. Dale.

Agricultural Research Council: Representation for Veterinary Science

Sir Frederick Gowlands Hopkins, O.M., M.A., D.Sc., F.R.C.P., F.R.S. (President of the Royal Society), who was the first of the guests to make reply to the enthusiastically honoured toast, first expressed the sense of privilege he felt at being one of those associated with the pleasant duty of responding for the guests. In spite, however, of the extremely kind and overgenerous words which they had heard concerning him from Professor Buxton, he yet felt that the guests were but ill-represented by one who was no orator—or rather he should say that he would feel that, but for the circumstance that they had further representation of a most adequate sort. It was true that Sir Charles Howell Thomas had eluded them, as the proposer of the toast had said, but his place had been taken by another representative of the Ministry, and they looked to the Ministry, and never in vain, for efficiency in all things.

One thing, perhaps, he might say for himself, and that was that he felt more qualified to speak on an occasion like that than he should have done a very few years ago. Like many other members of the British public, he was unfortunately for most of his life very vague concerning the activities of the veterinary profession; but now, owing to the fact that during the last few years he had fulfilled a good many

informative functions, he had learned of what vital importance the activities of their profession really were. He was now fully aware of the extreme economic importance of animal diseases, and of the urgency for their eradication, and he had also become aware of the very high standard required in the profession for the national service which lay ahead of it. He therefore realised to the full now how much respect and how many thanks were due from the nation to the veterinary profession.

If his fellow-guests might allow him, before coming to the real business of that toast, he desired to make a few remarks prompted by what had already been said. Their President had referred to the concordat between the University of Cambridge, from which he came, and that College, whereby in the near future Cambridge would offer a diploma in veterinary science to students who had been in residence there. It had been the hope of very many in Cambridge for many years that the University might do something towards assisting education in veterinary science. Dr. MacNalty had mentioned their revered Regius Professor, as he was a few years ago, Sir Clifford Allbutt, and how fully he recognised the importance of veterinary science, its close relation to medical science, and how he succeeded in obtaining further recognition for that important relationship at the Royal Society of Medicine and elsewhere; but it was part of Sir Clifford Allbutt's dream that Cambridge should be a centre in which veterinary science might be encouraged. That dream had been realised in large part in the establishment of that Chair of Pathology so ably occupied by Professor Buxton. (Hear, hear.)

Sir Clifford wished no less, however, that they should associate medical students and the students of veterinary science together in Cambridge teaching, leading to a contact that would help them to realise their common aims and interests, and he was there that afternoon to thank the College—in the absence of the Vice-Chancellor, and of the Master of Corpus Christi, who had much to do with the discussions which led to the happy outcome he had just referred to—and to express the gratitude of Cambridge for the generous and liberal attitude the College took in making certain concessions so that that most desirable outcome should be achieved.

He now came to a matter which was perhaps a little more difficult to discuss. He was sure that the College took the greatest interest in the progress of research in veterinary science and it had become one of the duties of the Agricultural Research Council to foster that research to the utmost of its ability. He knew that there had been an anomaly in the constitution of that Council—an anomaly which had been felt rather keenly by the veterinary profession: he meant that there had been no direct representation of veterinary science on that important body. He would like to be allowed just a few words of excuse, or rather of explanation, in regard to that unfortunate circumstance, and also to promise them an immediate reform. (Loud cheers.)

The Agricultural Research Council had its birth after a very long period of parturition, many and diverse obstetricians assisting. The final outcome was in detail perhaps not entirely what several among those who were thinking about the question at the time would have wished. In the first place he thought that the original personnel of the Council was rather too small. It was very remarkable how many interests had felt that they should have a place upon it. (Laughter.) There came a time when it was felt to be illogical that the Council should lack a representative of veterinary science, because the longer the Council sat the more it realised how important a part of its work was to encourage research towards the elimination of animal diseases. The first step towards the removal of that anomaly was an alteration in the Charter of the Council whereby its membership would be increased. The Council unfortunately had been unable to discover the right individual fully qualified and willing to represent the interests of veterinary science, and he thus found himself in a somewhat awkward position. He thought, however, he could assure them that they would hear of a nomination in a very short time which would give them satisfaction: unfortunately, he dared not mention names because the matter was not settled, but he would ask them to accept his assurance that in a few weeks that very important anomaly would be corrected. (Cheers.)

In conclusion, Sir Frederick expressed his thanks to Professor Buxton for the very kind way in which he had proposed the toast of the guests, and to the company for the enthusiastic manner in which they had received it.

Mr. H. E. Dale, Principal Assistant Secretary of the Ministry of Agriculture, who also responded, said that his first duty was to convey to them the profound apologies of Sir Charles Howell Thomas who had been called away by an imperative appointment, and who had left it to him, to his (the speaker's) regret, and doubtless theirs also (laughter), to take his place.

There was a time when the representatives of the Ministry of Agriculture would have been received at such a gathering as that with a certain polite indifference. In those days the Ministry had not much to do with the profession; it employed a few of its members for

work under the Diseases of Animals Acts, but otherwise it had little contact with veterinarians. It did little for veterinary education, and little for research into veterinary problems. Those days, he hoped, were long past; he did not venture to claim that the Ministry had altogether mended its ways in its efforts on behalf of the veterinary profession, but it did its best. (Hear, hear.) In spite of the financial stringency, Sir Frederick Hobday, aided and abetted by Sir Merrik Burrell, had succeeded in extracting from the Government no less a sum than £150,000 for a purpose which he thought they would all agree was most highly to be commended—he meant, of course, the reconstruction of the Royal Veterinary College. (Cheers.) He understood that the reconstruction of the College would be complete in something rather more than a year, and when that was done the profession, not unaided by the Government, would be able to point to this institution as one of which it might be proud; the teaching side of the profession would have a building of which no one need be ashamed. That was an indication of the manner in which the Ministry were endeavouring to do what they could to help the profession. (Hear, hear.) They did most cordially recognise what the profession had done for itself, first of all, through the extension of the period of qualification from four to five years, and subsequently through the opening of a new portal of entry through the great University of Cambridge.

The profession would have many great calls made upon it very soon: he was thinking largely of the milk and tuberculous cattle problems. But there were numerous others: for example, the exceedingly serious disease, contagious abortion, which would demand all the attention and skill the profession could devote to it.

He wanted to conclude by saying that although they might think that the Ministry had not done all it should do, nevertheless the Ministry did recognise that the veterinary profession had risen, and he was sure would rise in the future, to the increasing demands which agriculture and public health had made, and would certainly continue to make upon it. (Cheers.)

A Reuter message from Ottawa states that the Department of Agriculture announces that permits are being issued for the importation of cattle, sheep, swine and other ruminants into Canada from Scotland. Permits were discontinued about four years ago owing to outbreaks of foot-and-mouth disease in Scotland.

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The Royal Dublin Society has completed the arrangements for the Horse Show in August. Six nations will take part in the International Military Jumping contests.

N.V.M.A. Divisional Reports

DUMFRIES AND GALLOWAY V.M.A.*

DEMONSTRATIONS AT CARLISLE

A meeting of the above Division was held at the Crown and Mitre Hotel, Carlisle, on Tuesday, March 5th, 1935, the President, Mr. G. D. W. Davidson, Castle Douglas, being in the chair.

The following members were present: Messrs. John Allan, James Bell, W. T. Hewetson, W. L. Mackenzie, A. J. Milligan, J. Reid, R. Craig Robinson, W. Scott, R. Simpson, A. Steele, O. Stinson, A. Young and G. A. Sangster (Hon. Secretary). Messrs. J. Macaulay, R. E. Murison and Tom W. Woodhead were present as visitors.

Apologies for absence were received from Messrs. F. J. L. Croudace, P. McKinlay, W. G. Robinson, A. P. Steele and W. Jackson Young.

The minutes of the previous meeting, as published in *The Veterinary Record*, were approved, on the motion of Mr. A. J. Milligan, seconded by Mr. A. Young.

Election.—Mr. Alexander Gibson, Kirkcudbright, nominated at the last meeting, was elected a member of the Division on the proposal of the President, seconded by Mr. A. Young.

Nomination.—Mr. Adam Gibb, Dumfries, was proposed by Mr. A. J. Milligan and seconded by Mr. A. Young. Messrs. R. E. Murison and Tom W. Woodhead were proposed by Mr. R. Craig Robinson and seconded by Mr. A. J. Milligan.

Correspondence.—(1) From the President of the Scottish Branch, stating that it fell to the Dumfries and Galloway Division to nominate a President for the Scottish Branch for the year 1935. Mr. A. Young, Dumfries, proposed by Mr. A. J. Milligan and seconded by Mr. R. Craig Robinson, was elected as nominee from this Division.

(2) From the Secretary of the N.V.M.A. regarding the proposal for a composite subscription for members of the N.V.M.A. and its Divisions. After a discussion on the subject, it was decided that this Division was in favour of the proposal in principle, but would not commit itself further until a full scheme had been submitted by the N.V.M.A. for consideration.

(3) From the Secretary of the N.V.M.A. regarding a delegate to the Royal Sanitary Institute Congress. Mr. G. D. W. Davidson, Castle Douglas, was appointed.

(4) From Mr. J. Allan, Castle Douglas, with reference to an appeal for the Victoria Veterinary Benevolent Fund. Mr. Allan expressed

* Received for publication, April 18th, 1935.

the opinion that each member of the Division should be invited to send an annual subscription of at least 10s. 6d. to the fund. Mr. R. Craig Robinson gave a short report of the good which the Victoria Veterinary Benevolent Society were doing and appealed to each member to do what they could to assist.

(5) From the Secretary, R.C.V.S., regarding the Library Endowment Fund. It was agreed to send a subscription of £1 1s.

(6) From the Secretary of the N.V.M.A. regarding representatives on the Council of that body for 1935-36. The Hon. Secretary and Mr. R. Simpson, Carlisle, were appointed to represent the Division.

The report of the Special Committee appointed by the Council of the N.V.M.A. regarding the Report of the Cattle Diseases Committee was read, and it was decided to postpone any discussion on this until after the meeting of the Scottish Branch.

Next Meeting.—It was agreed to hold the next meeting, which would be in the form of a summer outing, somewhere in Galloway, the date and place being left for the President and Secretary to decide.

Other Business.—On the proposal of Mr. R. Craig Robinson, seconded by the President, a resolution: "That all veterinary surgeons attending officially at horse race meetings, except point-to-points, and dog shows, should be paid adequately for their services," was passed, for forwarding to the Council, N.V.M.A.

Clinical Matters

After lunch at the hotel, Mr. R. Craig Robinson, Carlisle, gave an account of a case of arsenic poisoning caused by sheep dip. The Court found in favour of the farmer, who received damages and expenses. [We hope to publish an account of this case in an early issue.—*Editor.*]

The members and visitors then adjourned to the farm belonging to Mr. Moffat, Low Cummersdale, Cumberland, where Mr. O. Stinson, Appleby, gave two demonstrations. The first was a modified method of castration of the horse with the object of preventing the appearance of a "scrotal sac" or bag, as a sequel to castration, and the second demonstration was primarily one of nembutalisation of the dog; the operation being castration with the hope of preventing the recurrence of impaction due to enlargement of the prostate glands.

The first subject was a two-year-old Dales pony. The method of anæsthesia was by chloroforming in the standing position. A dose of four-and-a-half ounces was given, that being sufficient for the desired result. The method of operation was, in the beginning, similar to that of the first stage in the covered operation in that the scrotal layers were severed until the vaginal sac presented itself. A small incision was then made through the sac and two pairs of artery forceps fixed to it, one on either side. The sac was then freely incised. The operation was completed by enclosing the testicular cord and about two inches of the vaginal sac, which was brought about by traction on the two pairs of artery forceps.

The Haussmann and Dunn emasculator was used and the usual antiseptic precautions were observed. The off hind limb was held forward to bring into view the seat of operation; no restraint was necessary.

The subject of the second demonstration was "Sandy of Crombie"—a pointer dog, aged five years, weighing 70-lb. Anæsthesia was induced by the administration of nembutal, after Professor Wright, with the exception that the injection was made into the recurrent tarsal vein of the *right* hind limb, it being considered a more suitable position for the dual performance of administering the anæsthetic and observing the reflexes. Twelve grains of nembutal were dissolved in 10 c.c. of warm tap-water; 7 c.c. being administered and bringing about light anæsthesia, which was supplemented by local anæsthesia. Ligatures were applied to the vascular portion of the "cord."

The demonstrator explained the technique as the operations were in progress and particularly wished it to be known that he claimed no originality in the new method of castration of the horse, as he had been informed by Mr. Gustav Naerland, of Norway, that the method demonstrated was commonly adopted in that country.

Mr. Stinson referred to the brilliant work done by Professor Wright and his assistant, Miss Oyler, on nembutalisation of the dog, and pointed out that their latest work was published in detail in *The Veterinary Record* of December 8th, 1934. It was suggested that those interested in the method should acquaint themselves with this article, as it is shown therein that the intravenous method of administration is preferable to the intraperitoneal method previously reported.

George A. Sangster, *Hon. Secretary.*

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WEST OF SCOTLAND V.M.A.*

ANNUAL MEETING AT GLASGOW

The Annual Meeting of the Division was held in the Grand Hotel, Glasgow, on Wednesday, May 8th, 1935, when the President, Jas. McFarlane, Esq., M.R.C.V.S., occupied the chair, and the following members signed the attendance book: Messrs. H. H. Brodie, Wm. Anderson, Andrew Sillars, David Brown, James F. Taylor, Donald Campbell, Wm. Watt, J. G. McGregor,

* Received for publication, May 15th, 1935.

Professor Wm. Robb, Mr. W. L. Weipers, Professor G. W. Weir and Mr. Alex. Thomson (Hon. Secretary). Messrs. W. Jackson Young (Edinburgh), J. D. McLauchlan (Stirling), Jas. Anderson (Strathyre) and E. Wallace (London) were present as visitors.

The minutes of the last meeting, as printed in *The Veterinary Record*, were taken as read and adopted.

Obituary.—Before commencing the business, the Chairman made reference to Professor Gaiger's death, and intimated that the Secretary had written on behalf of the Division to Mrs. Gaiger, expressing sympathy. The members stood in silence in tribute to his memory.

Correspondence.—Arising out of the correspondence, the Secretary intimated the resignations of Messrs. Esmond Brown, Andrew Cruikshank and Adam Gibb, these gentlemen having left the district to take up other appointments. Their resignations were accepted with regret.

It was agreed to donate a further £2 2s. to the R.C.V.S. Library Endowment Fund.

A letter from the N.V.M.A. asking for the views of the Division as to the desirability of a composite subscription being made to cover membership of the N.V.M.A. and the Divisions was considered, and it was agreed that the Secretary should write the N.V.M.A. asking them to submit their proposed scheme, when the Division would give the matter their consideration.

Arising out of a letter from the N.V.M.A. asking for the name of the official delegate to the Royal Sanitary Institute Congress, Mr. W. Jackson Young very kindly offered to act in that capacity, although he was not a member of the Division.

A letter from the N.V.M.A. asking the views of the Division with regard to a proposed scale of fees being drawn up for the clinical examination of Grade "A" herds under the Accredited Herd Scheme was read, but as the scheme does not apply to Scotland it was agreed to make no suggestions.

Election.—Captain C. Tracy was elected a member of the Division, on the proposal of the Hon. Secretary, seconded by Mr. W. Watt.

Finance.—The Treasurer then submitted his Balance Sheet, which was agreed to.

Election of Officers

The President, Mr. Jas. McFarlane, proposed Mr. W. Watt as his successor. This was carried unanimously.

Mr. Watt, in accepting office, thanked the members and expressed the hope that he would be worthy of the position.

The remaining offices were filled as follows:—

Vice-Presidents.—Mr. Hugh Begg and Mr. Wm. Anderson.

Hon. Secretary and Treasurer.—Mr. Alex. Thomson.

Auditors.—Professor Wm. Robb and Mr. Robert Mitchell.

Representatives to Council, N.V.M.A.—Dr. A. W. Whitehouse and Mr. J. G. McGregor.

Executive Committee.—Professor G. W. Weir, Messrs. D. Campbell, D. Brown, J. F. Taylor and Andrew Stark.

This concluded the business, and the members adjourned for tea, continuing their discussions in an informal manner.

A vote of thanks to the Chairman terminated the meeting.

Alex. Thomson, *Hon. Secretary.*

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NORTH OF IRELAND, V.M.A.*

A meeting of the above Association was held in the Imperial Hotel, Belfast, on Friday, May 24th, 1935. The President (Mr. McCrea) occupied the chair and the following members were present:—Messrs. Barclay, Clarke, Donnelly, Dunlop, Finch, Gault, Gilmore, Hart, Inglis, Jones, Kellett, Kelly, Kerr, H. G. Lamont, W. S. Lamont, Lawther, Logan, Loughran, McAllan, McArthur, McCaughan, McConnell (Senior), McFarlane, McLean, McNabb, Magowan, Moore, Morrow, Orr, Ranson, Robinson, Rosborough, Russell, Sim, Shanks, Stewart, Tweed, and Major Williamson.

The minutes of the Annual General Meeting were taken as read and adopted, having been published in *The Veterinary Record.* The Secretary read the minutes of the Council Meeting held on March 22nd, 1935. These were adopted and signed.

Correspondence.—Arising out of the correspondence the following resolutions were passed:

"That the sum of £5 be donated to the Royal College of Veterinary Surgeons Library Endowment Fund."

"That the Council should consider the suggestion made by the Organising Committee of the N.V.M.A. that a composite subscription should be instituted to cover the membership of the N.V.M.A. and of its Divisions."

"That Mr. McLean, City Veterinarian, be asked to represent the Division at the Annual Congress of the Royal Sanitary Institute."

Address.—The President now introduced Dr. Montgomerie, University College of North Wales, Bangor, and asked him to give his talk on "Some Sheep Diseases."

Dr. Montgomerie, whose address was received with great interest by all present, dealt in a most instructive manner with the following diseases:—Liver fluke, parasitic worms of the alimentary tract, pregnancy disease, pulpy

* Received for publication, June 6th, 1935.

kidney, strike, wool ball in lambs, lamb dysentery and braxy.

Mr. H. G. Lamont opened an interesting discussion which was continued by Messrs. McAllan, Hart, Kelly and Major Williamson.

On the proposition of Major Williamson, seconded by Mr. Gilmore, Dr. Montgomerie was enthusiastically thanked for providing such an excellent and educative talk.

Business.—The next item on the agenda was the consideration of the position of the part-time veterinary inspector who had not been absorbed into the Ministry of Agriculture with reference to (1) compensation; (2) contagious diseases appointments. After considerable discussion it was decided to send a letter to the Minister of Agriculture reminding him of the promise made to the deputation of veterinary inspectors which he received in October and respectfully requesting him to stand by these promises.

As the evening was getting late it was decided to postpone the remainder of the agenda till the next meeting. The meeting then terminated.

P. L. Shanks, *Hon. Secretary.*

From *The Veterinarian*

June, 1835

Let us open Aldovrandus, that incomparable naturalist; Conrad; Gesner, surnamed the Pliny of Germany; and that curious collection entitled "*Scriptores rei rusticæ veteres.*" These compilers have extracted everything that was to be found in the works of the Greeks and Latins. But what do they offer us but an assemblage of fragments of science scattered through a mass of worthless dross? What do they prove, but the strange extent to which men of the greatest genius will sometimes wander? Who would have believed that Aristotle would have affirmed that horses drink muddy water, in order the better to fill their veins? or that Xenophon would judge of the paces of the horse by the height of his hoofs, or his temperament and qualities by the length of his ears?

If we pass into Italy, what a mass of erudition does the work of Pascal Caracciolo present! True veterinary knowledge and practice are lost in an immense abyss of historical facts. He gives the history of Bucephalus, Pegasus, and Arion; he describes the armour of the ancients—the soldiers of Alexander — the attachments of Caligula to his horse, and of the horse of Nicomedes to him—the chariot of Pompey drawn by elephants—the eloquence of Cicero—the address and agility of the Numidians—the origin of the name of the Moon, and I know not what! It would take a volume to enumerate all that that book recounts.

History is not more favourable to the English veterinarians. Some of them denied the existence of the brain—others filled the sole with salt and bran in cases of apoplexy—some groomed the horse well with an iron comb, to remove constipation—others cauterised the flank for diseases of the spleen—and others prescribed effectual remedies for diseases of the horse's gall-bladder.

We pass in silence the German authors, distinguished only by their prolixity; and we examine, though humiliating to our national pride, the writers of our own country. One maintains that there are in the horse two sorts of blood—the vital blood, and the general mass of blood—and that the vital blood alone circulates while the animal sleeps; another affirms that there goes from the head of a horse a white nerve, which takes its origin from the tip of the nose, goes along the upper part of the neck, follows the spine of the back and fore limbs, and extends to the extremities of the feet!

Such was veterinary science before the establishment of the first modern school.

La Matière Médicale Raisonnée.

IN PARLIAMENT

The following questions and answers have been recorded in the House of Commons recently:—

Fowl Plague and Newcastle Disease

Mr. Turton asked the Minister of Agriculture in what countries, Dominions, or Colonies, the diseases of fowl plague and Newcastle disease have been known to exist during the last two years?

Mr. Elliot: I regret that the information at my disposal does not enable me to give the details asked for. I understand, however, that Newcastle disease is widespread in the Near East. One or other of these diseases occurs also in other parts of the Continent of Europe. Neither disease has been diagnosed in this country since August, 1933.

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Warble Fly

Mr. White asked the Minister of Agriculture whether his examination of the damage and loss caused by the warble fly is complete; and whether it is his intention to introduce legislation to deal with this matter?

Mr. Elliot: I regret that there is nothing I can usefully add to the reply which I gave on April 9th to a question on this subject by the hon. and gallant Member for Carnarvon (Major Owen).

. . . . . .

Heavy Horse-Breeding

Colonel Ropner asked the Minister of Agriculture whether he is aware that on June 10th, 21 draught horses were brought to Hull from Belgium for sale in Lancashire, and that further consignments are to follow; whether he is aware of the scarcity of suitable draught horses in this country owing to the discouragement given to breeders by the competition of motor traffic; and whether he will consider the desirability adjusting the present grant to heavy horse-breeding so as to ensure that all heavy horses required here are bred in this country.

Mr. Elliot: I am aware of the consignment to which my hon. and gallant Friend refers, but I have no knowledge as to future imports. I am also aware of the improved demand for draught horses and of the rise in prices from the previous low level, but I have no information suggesting a scarcity of such horses. As regards the last part of the question, I have nothing to add to the reply that I gave to my hon. and gallant Friend on May 27th last.

Notes and News

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

June 29th.—Joint Summer Outing of North-Midland and Yorkshire Divisions, N.V.M.A., meeting at Sheffield.

June 29th.—Meeting of the Scottish Metropolitan Division, N.V.M.A., at Perth.

June 30th.—Final date for payment of Annual Fees to R.C.V.S.

July 1st.—R.C.V.S. Diploma Examinations begin.

July 1st. — N.V.M.A. Committee Meetings, Royal (Dick) Veterinary College, Edinburgh.

July 2nd.—N.V.M.A. Committees, and Council Meeting, Royal (Dick) Veterinary College, Edinburgh.

July 8th.—Meeting of the Editorial Committee, N.V.M.A., at 2, Verulam Buildings, Gray's Inn, W.C.1, at 4 p.m.

July 29th—August 2nd: N.V.M.A. Congress at Belfast.

August 24th.—Last date for entries for Jubilee Memorial Prize Examination.

Sept. 24th to 25th.—Jubilee Memorial Prize Examination.

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PERSONAL

Captain H. A. Idenden, M.R.C.V.S., terminated his appointment with the Transjordan Frontier Force on June 18th last.

Captain Idenden had been with the Frontier Force since its inception in 1926 and had just completed nine years' service.

. . . . .

Presentation.—Mr. John Lyon, M.R.C.V.S., Banff, on leaving the area to take up a post with the Cheshire County Council, has been presented with a silver tea service by local farmers.

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Appointments.—Mr. Harold Burrow, M.R.C.V.S., D.V.S.M., Veterinary Officer of Birkenhead since 1930, has been appointed Chief Veterinary Officer to the Derbyshire County Council.

The following have been appointed Assistant Veterinary Officers on that County's Veterinary Staff:—

Mr. J. Birtwistle, M.R.C.V.S., D.V.S.M., of Haslingdon.

Mr. T. P. Briscoe, M.R.C.V.S., of Carlisle.

Mr. G. J. G. Halford, M.R.C.V.S., D.V.S.M., of Cambridge.

Mr. T. Y. Littler, M.R.C.V.S., of Melton Mowbray.

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DIPLOMA IN VETERINARY STATE MEDICINE

On the results of the Examination held by the Royal College of Veterinary Surgeons in Edinburgh from June 13th to 19th, the following candidates have been awarded the Diploma in Veterinary State Medicine: Cameron, John; Jamieson, Samuel; Kelly, Alexander; McLintock, John; Shepherd, Alex. M.; Stokes, T. F.

R.C.V.S. OBITUARY

Elliott, William Bernard John, 22, Wellclose Terrace, Leeds. Graduated Liverpool, December 19th, 1924; died June 12th, 1935, aged 36 years.

Hughes, John, Neuadd-Wen, Pwllheli, Cærnarvonshire. Graduated London, March 28th, 1896; died June 12th, 1935, aged 68 years.

Sellers, Alfred Joseph, Jesmond Dene, Hesketh Bank, near Preston, Lancs. Graduated Edinburgh, December 14th, 1895; died June 4th, 1935.

Young, Thomas Peter, 18, Pilrig Street, Leith, Midlothian. Graduated Edinburgh, April 27th, 1878; died June 14th, 1935, aged 80 years.

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SUCCESSFUL IRISH VETERINARY COUNCIL PROSECUTION

A fine of £1, with £2 expenses, was imposed at Rathdowney on Francis J. Whelan, Main Street, Rathdowney, charged by the Veterinary Council of Ireland with having acted contrary to the rules of the Council.

Mr. J. P. Carrigan, solicitor, Thurles, who prosecuted, said an advertisement had been inserted in a Kilkenny newspaper to the effect that he successfully treated ailments in cattle and dogs. This statement was likely to cause people to think that defendant was a qualified veterinary sûrgeon.

Accused, who pleaded guilty, said the advertisement only meant that he could prescribe for certain diseases.

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FOOT-AND-MOUTH DISEASE IN LANCASHIRE

The existence of foot-and-mouth disease was confirmed, on Thursday of last week, among cattle at Bamford, Norden, Lancashire.

The area subject to restrictions in the movements of animals lies in the counties of Lancaster, Chester, and Yorks. (West Riding).

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REGISTER OF DAIRY CATTLE

Volume xviii of the Register of Dairy Cattle has just been published. It contains particulars of 606 cows in respect of which Certificates of Merit have been awarded by the Ministry since October 1st, 1934, as compared with 680 cows entered in the previous volume. To be eligible for a Certificate of Merit, a cow must have given, during a period of three consecutive Milk Recording Years, not less than the prescribed yield of milk, and must normally have calved not less than three times during those years. The prescribed yields for the three-year periods are 30,000 lb. for Friesians; 27,000 lb. for Ayrshires, Blue Albions, Lincoln Red Shorthorns, Red Polls and Shorthorns; 24,000 lb. for all other breeds or types except Dexters; and 21,000 lb. for Dexters.

The Register contains a statement showing the number and distribution of the yields of the cows of the various breeds entered, and the highest yield certified for each breed for the three years ended October 1st, 1934. Of these cows, ten gave over 50,000 lb. of milk during the three years concerned; 44 over 40,000 and under 50,000 lb.; 74 over 35,000 and under 40,000 lb.; 193 between 30,000 and 35,000 lb.; 172 between 27,000 and 30,000; 66 between 24,000 and 27,000 lb.; and three between 21,000 and 24,000 lb.

Particulars are also given of pedigree bulls

of proved milking strain. The condition of entry of a bull in the Register is that its dam and sire's dam have given the standard yield prescribed for their breed or type in any particular Milk Recording Year. Enties relating to 19 bulls are given in the volume.

A list of the Milk Recording Societies of England and Wales, with particulars of each Society and the name and address of its Secretary, is included in the Register.

The Register is priced 1s. net and can be obtained from H.M. Stationery Office, Adastral House, Kingsway, London, W.C.2, or through any bookseller.

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NATIONAL HORSE ASSOCIATION

At a recent meeting of the National Horse Association of Great Britain, correspondence as regards horse riding in Epping Forest was submitted, indicating the formation of the Epping Forest Riding Association and maps as to the areas where horse riding had been prohibited by the City Council were submitted to the Council. It was resolved to co-operate fully with the new Association and to ask them to consider and comment on the maps. A number of old riders in Hyde Park asked the Association to suggest to the Office of Works the construction of sand riding tracks separated from the asphalt roadway; to run parallel with Park Lane and with the North Bank of the Serpentine. It was resolved to approach the First Commissioner of Works on the subject.

Various members commented as to the number of foreign horses now being imported into this country and it was decided to bring all particulars before the Ministry of Agriculture, indicating how seriously this matter affected horse breeders in this country.

The Secretary submitted various articles on the care and fitting of saddlery, etc., with a view to the issue of a fourth part of the "Horse Owner's Guide." These articles were accepted and the Secretary was instructed to obtain more articles by well-known authorities with a view to issuing a booklet at the end of the year, which would prove useful to the novice rider. The Secretary reported that he had recently written to publishers asking them to send him particulars of books dealing with horses and their management, with a view to issuing a list of useful books to members. A large number of books and circulars had been received and the Secretary would tabulate and review these books and submit his report to the next meeting of the Publicity Committee.

Several new riding schools were accepted by the Committee and the Association's Badge issued. Arrangements were also made for the inspection of other riding schools which had made application for approval. The Chairman of the Riding Committee indicated that the Association would be pleased to have details of all hotels and farms where riders could be accommodated for a night or two when on tour.

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Stoke-on-Trent Council has decided to appoint a whole-time veterinary surgeon. At present the Council employ three part-time veterinary surgeons, dealing with cattle, two meat inspectors, and one food and drugs inspector, dealing with milk, and it was explained that the difference in cost would be about £300 a year, which it was contended would be more than compensated for by a reduction of sickness and disease.

H.M. STATIONERY OFFICE PUBLICATIONS

The undermentioned have been published recently. Copies can be purchased through any bookseller, or directly from H.M. Stationery Office, at the following addresses: London: Adastral House, Kingsway, W.C.2, and 28, Abingdon Street, S.W.1; Cardiff: 1, St. Andrew's Crescent; Manchester: York Street; Edinburgh: 120, George Street.

	Price Net. s. d.	*Post Free.* s. d.
Draft Statutory Rules and Orders, 1935:—		
Pharmacy and Poisons Act, 1933 (23 and 24 Geo. 5. Ch. 25). Poisons. 1. The Poisons List prepared and submitted for the approval of the Secretary of State by the Poisons Board in accordance with Section 17 of the Act. II. Draft of the Rules to be made by the Secretary of State in pursuance of Section 23 of the Act. (Published June 19th, 1935)	0 8	0 9
Dangerous Drugs. The Dangerous Drugs (Approved Instructions) No. 15 Order dated June 14th, 1935 (34-9999)	0 1	0 1½

H.M. Stationery Office (Belfast) Publications

The undermentioned have been published on behalf of the Government of Northern Ireland. Copies can be purchased directly from H.M. Stationery Office, 80, Chichester Street, Belfast, or from any of the addresses given above.

	Price Net. s. d.	*Post-age.* s. d.
Statutory Rules and Orders, 1935:—		
63. Agricultural Marketing (Pig Industry) Act, 1934. Appointed day for the operation of certain provisions	0 1	0 1½
65. Dangerous Drugs, Act, 1932. Appointed day for operation of all provisions	0 1	0 1½

Correspondence

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

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GRUNTING IN HORSES

To the Editor of The Veterinary Record

Sir,—Is not this phenomenon purely temperamental or psychological? Having grunted a horse with a positive reaction, one is on the *qui vive,* but no one surely is going to cast an animal on this ground, though to save one's face one may remark on it.

Having had a long experience of Africa and its indigenous ponies, I am inclined to the opinion

that "Roaring" and "Whistling" are on the increase in this country, due, in my humble opinion, to two fundamental reasons:—

1. Breeding from stock with inherent tendences to these diseases.

2. The somewhat pampered conditions under which animals are reared and brought up in these modern days.

I am, Sir,
Yours faithfully,
T. A. Bryan Cocksedge.

The Spinney,
Amersham.
June 22nd, 1935.

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THIRD YEAR EXAMINATION RESULTS

To the Editor of The Veterinary Record

Sir,—What Mr. Chambers has written about in your issue of June 22nd is common knowledge not only to the general practitioner, but even to a student in his First Year, namely, that Class C, Pathology and Bacteriology, is the great stumbling block.

There are various possible explanations. The subject may be badly taught, as it is a sad reflection that of recent years the veterinary profession has not produced one all-round authority of note in these subjects. The student, on the other hand, may be asked a lot of unfair questions. Mr. Chambers quotes a classical example in this connection. Further, of late years, a lot of Chemical and other Pathology, mostly of a strictly medical nature, has crept in which is quite unnecessary for the student destined for general practice. In fact, he is often better without this knowledge. For this reason, more than any other, I would advise the subject to be examined on by members of the veterinary profession only. The very contradictory results of Chemical Pathology can be illustrated by a case which recently came to my knowledge. A man in middle age was operated on for gall stones under Avertin. Forty-five gall stones were removed. He went on well for five days, and then started vomiting quantities of black stained fluid. Glucose was given intravenously together with Coramine, etc. He then developed suppression of the urine. An eminent professor of Pathology was called in, and although its use was strongly contraindicated and he stated that it was a case of kill or cure, advised the use of Synergin (Bayer). The patient recovered, passing two pints of urine within 24 hours.

I venture to suggest that if these subjects were taught and examined on within the limits in the time of both Mr. Chambers and myself, the modern student would find that the examination was by far the most interesting and easiest of the whole curriculum.

I will go further and say, that in many, if not all, of the subjects in the curriculum, there is far too much theory and not enough practical. In Botany, all that should be required should be a knowledge of and recognition of Poisonous and Forage plants. In Anatomy, the chief concern should be Surgical. It was well known in my time that one of the examiners in Surgery was all against the suturing of wounds other than surgical, and so the unfairness goes on.

A student should get fair play. There is nothing clever in asking him catch or specialist questions, any more than asking him to do an operation that he may never have to do in this life. In my Final, I failed to do my fourth operation, and so lost "Honours," but not once in 21 years have I even had to consider the operation. A student should be asked to name what operations he would like to do, and be examined on one or more. If he can do them he will do the others, if not then, later on. After all, we all gain at the expense of our client or rather patient. That is why Providence sends them along.

Yours faithfully,
J. F. D. Tutt, f.r.c.v.s.

Winchester.

Diseases of Animals Acts

SUMMARY OF RETURNS

Period.	Anthrax.		Foot-and-Mouth Disease.		Parasitic§ Mange.		Sheep Scab.	Swine Fever.	
	Outbreaks confirmed.	Animals attacked.	Outbreaks confirmed.	Animals slaughtered as diseased or exposed to infection.	Outbreaks reported by the Local Authorities.	Animals attacked.	Outbreaks confirmed.	Outbreaks confirmed.	Swine slaughtered.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Period 1st to 15th June, 1935	13	14	—	—	3	46	5	108	63
Corresponding period in									
1934	5	5	—	—	4	8	8	55	38
1933	4	4	—	—	4	6	2	83	81
1932	10	10	—	—	6	11	3	76	45
Total 1st January to 15th June, 1935	200	224	32	10,109	67	143	183	861	413
Corresponding period in									
1934	207	219	2	93	85	137	332	744	441
1933	157	177	56	5,350	94	169	199	748	427
1932	214	269	3	358	78	136	130	983	463

Note.—The figures for the current year are approximate only.

§ Excluding outbreaks in Army Horses.